

The Road to Cleaner Air

Newsletter of the Ann Arbor Area Clean Cities Coalition

Winter 2002



ANN ARBOR AREA CLEAN CITIES COALITION FIRST TO REACH 2010 CLEAN CITIES GOAL!

The Chicago and Atlanta Clean Cities groups held a regional meeting in St. Louis, Missouri on October 15-17, 2001. Clean Cities national headquarters presented information on AFV numbers for all 12 Chicago Region Clean Cities. The national Clean Cities goal is 1,000,000 AFV's on the road by 2010. This requires an annual growth rate of 17% for each coalition. As shown in the chart below, Ann Arbor has already surpassed the 2010 goal! If this were a race, we would have won! But we have no plans to stop here, as there is still much to accomplish.

INSIDE THIS ISSUE

PAGE 1

Ann Arbor Area Clean Cities Coalition Exceeds 2010 Goals

PAGE 2

Upcoming Events
Ann Arbor Green Fleets Policy

PAGE 3

Rio+10 Conference
Green Fair
AFV News and Rebates

PAGE 4

Special Ethanol Report

PAGE 5

Fuel and National Security
Clean Grants

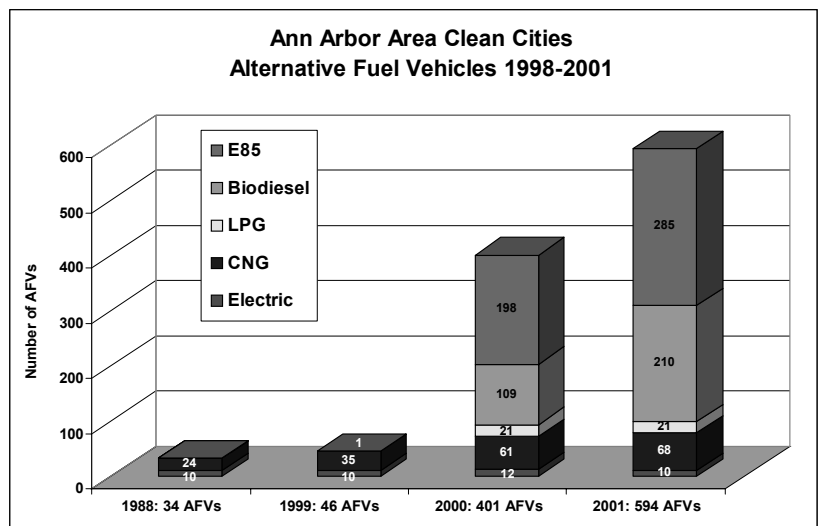
PAGE 6

Alt Fuel Options for Diesel

PAGE 7

Emissions Comparisons
Fuel Cell Update
MI Clean Cities Coalition News

Chicago Region Clean Cities Member	Number of AFVs in 2000	Clean Cities AFV target for 2010
Chicago, IL	2,843	10,540
Peoria, IL	195	1,002
Central Indiana	847	5,118
Evansville, IN	449	1,928
South Shore, IN	859	4,208
Ann Arbor, MI	381	249
Detroit/Toronto	835	4,636
St. Louis, MO	1,253	5,254
Northeast Ohio	1,524	5,633
Tri-State Area, OH	1,240	5,551
SE Wisconsin	1,740	5,887
Twin Cities, MN	1,062	1,684



The *Road to Cleaner Air* is a biannual publication of the Ann Arbor Area Clean Cities Coalition, operated through the City of Ann Arbor Energy Office. Additional information on the Clean Cities Program and alternative fuel vehicles can be found at the National Clean Cities website: www.cities.doe.gov. For information on the Ann Arbor Area Clean Cities Coalition see cot.emich.edu/cleanair or contact Coordinator, David Konkle at 734-996-3150 or through email: dkonkle@ci.ann-arbor.mi.us.



UPCOMING EVENTS

Alternative Fuel Vehicle Odyssey: The National AFV Odyssey will be held on April 11, 2002 in Ann Arbor, Michigan at Weber's Inn. The Ann Arbor Area Clean Cities Coalition is partnering with Lansing Community College to host the Michigan site of the AFV Odyssey. Lansing Community College is a member of the National Alternative Fuels Training Consortium, the national sponsor of the AFV Odyssey. The AFV Odyssey is being held at over 50 locations nationwide on April 11th to raise public awareness about alternative fuel vehicles. For details on the AFV Odyssey, check out the official website at www.nationalafvodysey.org/.

Clean Cities Conference and Expo: The 8th Annual National Clean Cities Conference will be held in Oklahoma City, OK from May 12-15, 2002. The exposition is for anyone with an interest in energy security, clean air, and AFV technologies. It is the best single place to get the latest information on AFV's. The popular Ride-n-Drive will be expanded to a full 6 hours this year to give plenty of opportunities for attendees to take part in "the Great Car Roundup" of alternative fuel vehicles. For more information, www.cccities.doe.gov/okconference.shtml.

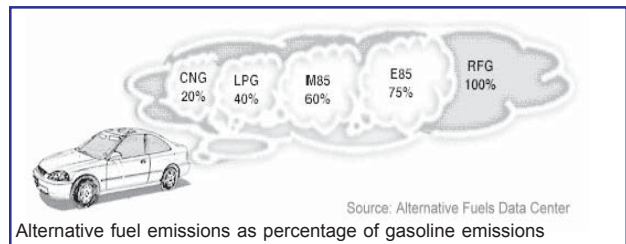


Library To Host AFV Exhibit: The Ann Arbor District Library's Main Branch on 5th Avenue will host an exhibit of alternative fuel vehicles as part of its Sustainability Month. The exhibit will take place on May 4th, 2002.

Earth Day: The EPA Office of Transportation Technologies in Ann Arbor will be holding their annual Earth Day open house on Sunday, April 21, 2001. Alternate fuel vehicles and other clean air technologies will be featured at the OTT office on Plymouth Road.

Ann Arbor Designs Green Fleets Policy

Why is the City of Ann Arbor spending time, energy and money to become one of the first cities to "green" their vehicle fleet? Why is a green fleets policy so important to local communities like Ann Arbor anyhow? The problem facing Americans is that their addiction to on cars is not healthy for them—literally! The average US citizen is the most automobile dependent person in the world. While automobiles add speed and convenience to our lives, these features come at a tremendous cost. Automobiles consume fossil fuels, and their combustion releases harmful emissions "in the faces" of citizens throughout their everyday activities at work, home, play, or school.



Auto emissions are the single largest contributor to air pollution in many cities, and account for 1/3 of all air pollution in the United States. Uncontrolled emissions make our air unhealthy to breathe and increase health care costs. In addition to endangering public health, auto emissions also increase atmospheric levels of carbon dioxide, which causes global warming.

Ann Arbor is trying to do something about it, and hopefully other local fleets and municipalities will follow our example. The proposed Ann Arbor Green Fleets policy sets a goal of reducing gasoline and diesel fuel consumption and related pollution by 10% in ten years. Among the measures included in the Green Fleets policy are:

1. At least 10% of new purchases must be alternate fuel vehicles;
2. Bi-fuel vehicles must be operated on the alternative fuel whenever possible;
3. A 20% "green" purchasing incentive allows choosing vehicles above the lowest bid;
4. The use of "clean" fuels will be considered if options exist.

For more information please visit www.greenfleets.org.

News Flash--Government not compliant with EPA Act

Environmental groups are suing the U.S. government to force it to comply with the 1992 Energy Policy Act (EPA Act) requiring federal agencies to purchase alternative fuel vehicles (AFVs). The lawsuit accuses 18 agencies--including the Department of Energy and the EPA--of not purchasing enough alternative fuel vehicles to reach legislated goals of 75% AFV fleet composition. The big loophole: EPA Act requires agencies to purchase alternative fuel vehicles, but not to use alternative fuel. Bi-fuel vehicles are frequently run on gasoline only. The non-profit legal organization Earthjustice filed the suit on behalf of the Center for Biological Diversity, Bluewater Network, and Sierra Club.

It's outrageous that even when the federal government is legally required to reduce oil dependence, they can't do it. Their only policy is to buy oil, and that's bad news for global warming and energy security, but good news for oil sheiks.

--Russell Long, Executive Director, Bluewater Network

Ann Arbor Hosts United Nations Summit Meeting

On June 20-23, 2001, Ann Arbor hosted a conference for environmental and municipal leaders from the US and Canada. Their mission was to prepare the local government presentation for the upcoming United Nations "Summit on Sustainable Development" (called Rio+10) to be held in 2002. The Ann Arbor meeting was one of six held around the world to prepare the local government presentation for the Summit. Automobile manu-

facturers, in a show of strong support for the conference, donated 14 alternate fuel vehicles for use at the conference including a hybrid bus from General Motors, five Th!nk Neighbor and two Th!nk City vehicles from

Ford, five GEMs from Daimler Chrysler, and an IT from Dynasty Motorcars. The bus and the electric cars were used to transport conference visitors to and from hotels and conference activities.



Green Fair Supports International Conference

Ann Arbor held a Green Fair on June 23, 2001, the last day of the Rio+10 conference. Main Street was closed on a Friday night so that over 35 environmental organizations could set up exhibits. The fair drew thousands of visitors. One of the highlights of the fair was the Ann Arbor Area Clean Cities Exhibit which featured 18 alternate fuel vehicles. A fleet of 12 electric vehicles was available to for attendees to test drive. Over 200 people were able to take advantage of the opportunity before the batteries were depleted on all the vehicles!



Rio +10 Conference

Local Alt Fuel Vehicle News

Green Light Transport Opens in Ann Arbor: Green Light Transport, Ann Arbor's first electric car dealership, opened on July 14, 2001 selling the "IT," a low-speed electric vehicle produced by Canadian company Dynasty Motorcar and electric bicycles by E-Bike (the ones by Lee Iacoca). The owners of Performance Network of Ann Arbor recently used a \$1,000 low-speed electric vehicle rebate to facilitate their purchase of a yellow IT for their downtown commuting use. Owner Paul Tinkerhess (in photo at right) is researching additional electric vehicles to offer at Green Light Transport. He can be reached at (734) 668-1644.

Vehicle Rebate Program: The City of Ann Arbor has \$2,000 rebates available for the purchase of dedicated alternate fuel vehicles in the Ann Arbor Area. A \$70,000 grant was awarded by the DOE in June, 2000 and funds will be available through May, 2003. The DOE, due to budget constraints, has only allocated \$26,000 of the grant funding and are not guaranteeing any additional allocations. A total of six \$2,000 rebates have been awarded so far--five for natural gas powered City of Ann Arbor fleet vehicles (two Dodge Ram Vans and three Ford E250 Cargo Vans), and one for a natural gas powered Honda Civic to an Ann Arbor citizen. There is still \$14,000 available for rebates. If you have purchased in the last two years, or are planning to purchase a dedicated alternate fuel vehicle, contact the Energy Office at (734) 996-3150 and see if you are eligible. As with most things, some restrictions apply.

Alternative Fuel News Special: Ethanol

Michigan's First Ethanol Plant: Michigan Ethanol broke ground on its first ethanol production facility in Caro, Michigan in late November. The facility will produce 40 million gallons of ethanol per year. Michigan's demand for ethanol, primarily for flex-fuel vehicles, doubled last year, to 60 million gallons. In September, a \$5 million appropriation for Michigan's first large-scale ethanol plant was passed by the Michigan Legislature and signed by Governor Engler for the 2002 budget. Other funding comes from approximately 400 farmers of the Michigan Corn Processors Association. The plant will utilize up to 40,000 bushels of corn a day and should be completed in the fall of 2002.

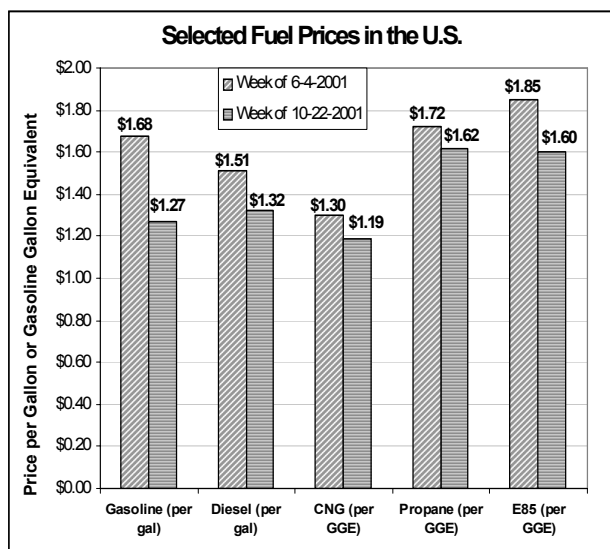
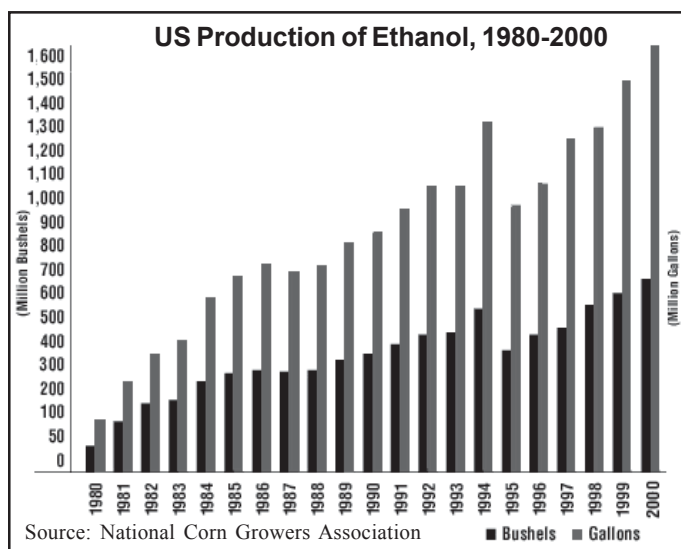
Ethanol Workshop: The Corn Marketing Program of Michigan (CMPM) in partnership with the Michigan Departments of Consumer & Industry Services/Energy Office and Agriculture held the third annual Michigan Ethanol Workshop on September 26th in Lansing. This year's workshop had the highest attendance and the most legislator participation ever. Announcements about the many positive and recent developments in Michigan related to the new ethanol plant and supportive legislation were especially well received. Discussion during the wrap-up session focused on the need for more consumer education including ethanol refueling site promotions, school/youth education, and the need for a standard ethanol logo/slogan. Additional items discussed were: pump labeling of ethanol, the need to improve Michigan's ethanol infrastructure, and E85 pricing.



Additional items discussed were: pump labeling of ethanol, the need to improve Michigan's ethanol infrastructure, and E85 pricing.

MTBE decision to spark ethanol boom: Federal requirements for cleaner burning gasoline included oxygen-rich compounds—or oxygenates—as part of the 1990 Clean Air Act Amendments. The special fuel mixture, also known as reformulated gasoline (RFG), was federally mandated for use in regions with the most acute air quality problems. In California's case, the RFG mandate affected about 70 percent of the state. MTBE, or methyl tertiary butyl ether, was the primary oxygenate used in California, but its link to water contamination prompted the state to ban MTBE use by 2003. The upward trend in ethanol production was boosted by the Bush Administration's June 12, 2001 decision to deny California's oxygenate waiver request. Now, ethanol is the only additive that can substitute for MTBE under California's specifications. California is expected to need 580 million gallons of ethanol a year as it phases out MTBE by 2003. Other states may also find themselves looking to ethanol as MTBE faces further challenges.

Record-Breaking Ethanol Production: U.S. ethanol production in August reached a record-breaking high of 114,000 barrels per day, according to the U.S. Energy Information Administration. If this trend continues, U.S. ethanol production could reach an all time high of 1.8 billion gallons for this year.



National Security: Legislative Focus on Renewable Fuels

Since the September 11, 2001 terrorist attacks on the World Trade Center and the Pentagon, the Bush Administration and Congress are reconsidering their business-as-usual approach to energy consumption. The United States imports almost 60% of its oil supplies, yet it has both plentiful natural gas supplies and ample biofuel crop production. Serious consideration of national fuel self-sufficiency can not only aid national security, but lead to more sustainable energy use and help American businesses and farmers in the process.

Proposals prior to September 11:

-- the *Alternative Fuel Vehicle Acceleration Act of 2001* (HR2326), authorizing a \$200 million grant DOE program to promote up to 15 AFV demonstration projects.

-- HR2518, the *2001 Clean Green School Bus Act*, designed to promote alternative fuel school bus fleets and a demonstration project of fuel cell school buses.

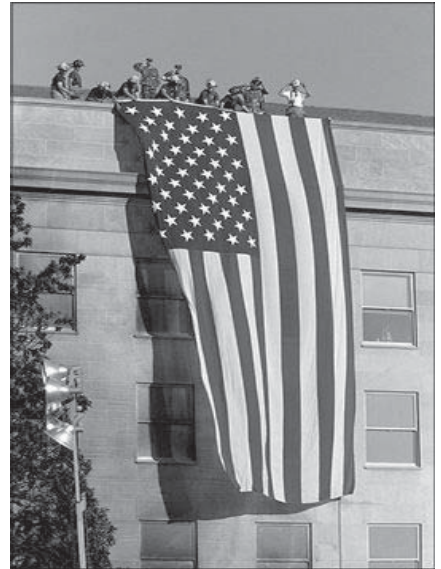
--the *Energy Independence Act of 2001* (S883) to establish and promote fuel cell technology. The Act would also require federal fleets to plan a transition to fuel cell vehicles, and establish a fuel cell grant program for state and local governments.

Proposals since September 11:

--Senator Daschle's proposed Energy Plan 2002 focuses on alternative fuels.

--the Dept Of Defense has shown interested in alt fuels, especially biodiesel, placing a number of large orders for critical fleets.

Projected economic benefits support the push for energy security. A new study estimates that renewable fuels legislation could boost the U.S. economy by \$300 billion, creating 300,000 new jobs by 2016. It would also save taxpayer dollars by reducing farm subsidies as biomass fuel crop acreage increases. A copy of the AUS study is at <http://www.biodiesel.org>.



White House photo by Paul Morse

--Clean Cities Program, Next Round of Grants - The Department of Energy announced that there will be more than \$4 million available for grants to fund Clean Cities programs and projects.

A solicitation will be released in December which will pay for niche markets, infrastructure, school buses, AFV signage and Clean Cities Coordinators. These funds are available only to designated Clean Cities coalitions.

Clean Grants for Ann Arbor

Ann Arbor Receives Grant for Low Speed Vehicle Pilot Program

The City of Ann Arbor was awarded a \$10,000 grant from the Michigan Energy Office to encourage the use of low-speed electric vehicles in Ann Arbor. Low-speed vehicles have a maximum speed of 25 mph and are legal on any road with a posted speed limit of 35 mph or less. The grant allows the City to offer ten \$1,000 rebates to purchasers of low-speed electric vehicles.

Local citizens also qualify for these rebates and some have already capitalized on these funds. The first rebate for a "NEV", or Neighborhood Electric Vehicle went to the owners of the Performance Network. Ann Arbor still has nine more rebates of \$1,000 available. Parking incentives and downtown charging stations are being considered by the City and Downtown Development Authority. NEVs typically cost from \$7,000 to \$13,000 each. A 10% federal income tax rebate is also available for electric vehicle purchasers.

Heavy Duty Vehicle Grant Awarded for Natural Gas Garbage Hauler

Those huge haulers roaming the city for garbage and recyclables are some the biggest fuel users in the City. Being diesel fueled, they are also major sources of local air pollution, especially particulate emissions.



Working again through the State Energy Program, the City of Ann Arbor was awarded a \$48,700 grant to pay 66% of the incremental difference in cost difference between a standard diesel refuse-hauler and a cleaner, natural gas powered substitute. The refuse vehicle being replaced uses over 4,000 gallons of diesel fuel per year.

Alternative Fuel Options for Diesel Engines

Diesel fuel has long been criticized for producing unattractive clouds of exhaust from trucks and buses. Now, in an alarming new development, a recently released EPA study found that **diesel emissions accounts for 78% of the total added cancer risk in outdoor air from all hazardous pollutants combined!** Diesel is also the primary reason for increased numbers of “ozone action days,” when excess nitrous oxides (NO_x) and volatile organic compounds (VOCs) create harmful lower atmospheric ozone that aggravates respiratory illness and eventually reduces lung function. The implications of the report are clear: reducing diesel emissions or replacing diesel with cleaner alternatives will enhance the urban quality of life, improve respiratory health, and reduce pollution-related deaths.



BIODIESEL - Biodiesel is primarily produced from the oil of soybeans, a domestically abundant crop, but can also be produced from a number of organic sources including used fryer fat. Biodiesel can be used in diesel engines without any modifications. Using this renewable fuel actually cleans a diesel engine, prompting the advice, “After you switch to bio-diesel, check your fuel filter. Biodiesel cleans the ‘crud’ from your fuel lines which can necessitate an early filter change!” The use of biodiesel significantly reduces truck emissions, enhances US energy security, and supports the U.S. farming economy. The Congressional Budget Office, Department of Defense, and Department of Agriculture have defined biodiesel as a low cost alternative fuel option for fleets to meet requirements of the Energy Policy Act. Prompted by the EPA report, the City of Ann Arbor is also exploring the benefits of biodiesel fuel. For the first time this summer, Ann Arbor’s fleet began using a 20% biodiesel (B20) mixture for all trucks fuelled at the City Garage or landfill. 17,500 gallons of B20 were used in 2001, at a 20 cent/gallon premium. The University of Michigan began using biodiesel about a year ago and Detroit Edison started using biodiesel at their Ann Arbor service center on Broadway in August.

NATURAL GAS - While biodiesel is convenient because no fuel system changes are necessary, compressed natural gas (CNG) is currently the cleanest burning fuel available for vehicles. The only cleaner vehicles currently available run on electricity and have zero emissions. Heavy duty vehicles--especially trucks and buses--are now being produced with natural gas fueling systems to displace diesel fuel. Heavy duty vehicle emissions vary based on how the truck is driven and type of engine, but there is widespread agreement that CNG is considerably cleaner than diesel. Data from actual on-road tests comparing natural gas and diesel busses show a reduction in particulate emissions of 80-90%, and NO_x reduction of 50-60%. In comparison, the use of biodiesel also reduces particulate and NO_x emissions by around 10%, and sulfur by 20%.



NEED INFORMATION ON ALTERNATIVE FUEL VEHICLES ?

The Department of Energy’s online Fleet Buyer’s Guide has easily accessible info on both light- and heavy-duty alternative fuel vehicles at www.fleets.doe.gov.

**Representative emissions for diesel engines.
Emissions vary greatly with type of driving and engine design.**

Diesel Emission Type	% emission reduction by using biodiesel	% emission reduction by using CNG
Sulfur dioxide	20%	100%
Particulate matter (PM10)	8%	80-90%
Hydrocarbons (non-methane)	14%	89%
Carbon monoxide	9%	70%
Carbon dioxide	16%	20%
Nitrous oxides (NO _x)	10%	20-30%

**Fuel Cell Update:
GM bringing power to
your...home?**

General Motors has adopted a new strategy for introducing fuel cell vehicles, and although the strategy does involve being the first automotive manufacturer to produce one million fuel cell vehicles, the first fuel cell you buy from GM may go into your basement. In mass production, GM's stationary 5 kilowatt fuel cell units will be about the size of a conventional air conditioner and will run on natural gas. Larger units could power hospitals, factories, or entire subdivisions. It is unclear at this point if the units will carry the GM brand or if they will be delivered under a different brand. Cost information was not made available, but commercial units are expected by 2003. The rationale behind GM's strategy is that mass production of stationary system components will bring down costs for similar components in vehicles. Developing networks of fuel cell suppliers, gaining experience with fuel cell technology, and making a profit from a new product will also help GM advance its work on automotive fuel cell applications.



Michigan Clean Cities Coalition News

The **Detroit/Toronto Clean Cities Coalition** is attempting to regroup after SEMCOG could no longer provide coordination services. They are working on a plan to hire a new Clean Cities Coordinator.

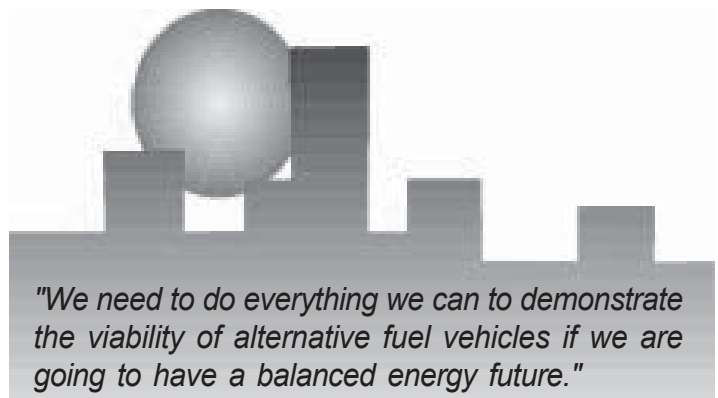
The **Lansing Clean Cities Coalition** continues to be optimistic about getting their Clean Cities Program Plan approved by the national Clean Cities office in Washington. Check out their website at <http://cityoflansingmi.com/cleancities/lansing.html>.



The Road To Cleaner Air
Newsletter of the Ann Arbor Area
Clean Cities Coalition
City of Ann Arbor Energy Office
100 North Fifth Avenue
P.O. Box 8647
Ann Arbor, Michigan

ANN ARBOR AREA CLEAN CITIES STAKEHOLDERS

- ❖ City of Ann Arbor
- ❖ Washtenaw County Government
- ❖ Ann Arbor Transportation Authority
- ❖ Ann Arbor Public Schools
- ❖ University of Michigan
- ❖ Eastern Michigan University
- ❖ Detroit Edison Company
- ❖ Michigan Consolidated Gas Company
- ❖ Ecology Center
- ❖ U.S. E.P.A. National Vehicle and Fuel Emissions Laboratory
- ❖ Michigan Department of Environmental Quality - Air Quality Division
- ❖ Michigan Department of Consumer and Industry Services - Energy Resources Division



"We need to do everything we can to demonstrate the viability of alternative fuel vehicles if we are going to have a balanced energy future."

—Congressman Sherwood Boehlert (R-NY)